



WORKING CAPITAL MANAGEMENT COMPONENT AND FIRM PROFITABILITY: AN EMPIRICAL ANALYSIS

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ABSTRACT

This study investigates the relationship between working capital management in terms of account receivable, account payable, inventory conversion period cash conversion cycle, firm size, liquidity, financial leverage and corporate financial performance of oil and gas companies listed on the Nigeria Stock Exchange. The study utilizes an ex-post-facto research design using panel data for the period of five years covering 2013-2017. Population of the study is the twelve companies listed on the Nigeria Stock Exchange. Purposive sampling method was used to select eight companies having consistent data set for the study period. Panel regression analysis was used in analyzing the data. The study found significant influence of account payable and inventory conversion period on the profitability (ROA) and there is no significant influence of account receivable, cash conversion cycle, firm size, liquidity and financial leverage on the profitability (ROA) of oil and gas companies listed on the Nigeria stock exchange. The study therefore concludes that account payable and inventory conversion period are the major determinants of profitability of oil and gas companies listed on the Nigeria Stock Exchange. The study therefore recommends that management of oil and gas companies should intensify effort to ensure that debtor's payment period is reduced to the bearest minimum, creditors settlement period is extended, inventory conversion period should be minimized, cash conversion cycle should be effective and also to ensure the growth and expansion of oil and gas companies, ensure adequate liquidity position of those companies and also ensure minimum or non interest rate on external borrowing.

Keywords: *inventory, conversion, intensify, consistent, influence*

Introduction

Sound policies on working capital management increase firms' profitability and market value, and negligence of working capital management leads to operational challenges. Working capital management is therefore referred, according to Afeef (2011) as one of the most imperative and crucial aspect of short term financial matters of an organization as firms of all sizes demonstrate sensitivity of their profit performance to the efficient management of their working capital.

The problem of working capital management emanates when manager of firms fail to manage the short term resources and the short term liabilities and the relationship between them. An ideal business needs sufficient resources to keep it going and ensures that such resources are maximally utilized to enhance its profitability growth and overall performance (Muhammad, 2016). Lack of empirical evidence on the working capital management and how it impact on firm financial performance in oil and gas companies listed on the Nigeria stock exchange is the motivating factor. It is a general belief that the problem is almost untouched and there is a research gap in this area and lack of proper research study enables managers to have little awareness about working capital management in order to increase firm performance (Aza, 2020).

There has been no prior work conducted in Nigeria on the influence of working capital management on financial performance of oil and gas companies in Nigeria. Several studies have been carried out in different countries other than Nigeria and in different industries on the impact of working capital management on corporate profitability but the result or findings from these studies have been consistently inconsistent. This gives room and knowledge gap for further investigation into the area (Aza, 2020)..

The major objective of this study is to ascertain the relationship between working capital management components and profitability measured by return on Asset. The following is the hypothesis of the study:

H₀₁: There is no Significant relationship between Cash conversion cycle, inventory turnover, account receivable, account payable, liquidity, firm size and financial leverage on the corporate financial performance (ROA) of oil and gas companies listed on the Nigeria stock exchange.

This study utilizes an ex post facto research design using panel data regression for the period of five years covering 2013 to 2017 to explore the relationship between the working capital management components and profitability (ROA) of oil and gas companies listed on the Nigeria Stock Exchange and the nature of relationship that exist among the variables.

Population of the study is the twelve oil and gas companies listed on the Nigeria stock exchange. Eight oil and gas companies are used and their selection is based on the availability of data set covering the five year period spanning from 2013 to 2017. Purposive sampling technique is therefore used and the sampled oil and gas companies are;

1. Japaul oil and Maritime services plc,
2. Oando Plc,
3. Mrs Oil Nigeria Plc,
4. Total Nigeria Plc,
5. Forte Oil Plc,
6. 11Plc (Formerly Mobil Oil Nigeria Plc),
7. Conoil Plc,
8. Eterna Oil Plc.

The study utilizes secondary source of data collection from Nigeria Stock Exchange (Fact books) for the five year study period (2013 - 2017).

The study employs OLS panel regression, fixed effect or random effect regression analysis using E-Views version 9 to examine the relationship between the working capital management components in terms of (CCC, INT, AR, AP, LIQ, FSIZ and FLEV) and profitability (ROA).

The study covered a five year period spanning from 2013 to 2017 to explore the relationship between the working capital management and profitability (ROA) of oil and gas companies listed on the Nigeria stock exchange.

Concept of Working Capital Management

Melita (2010) described working capital as the capital available to meet the day-to-day operations and depending on the industry; it could be a relatively high percentage of the total asset of the organization. According to Muhammad (2016) “working capital is the money needed to finance the daily revenue generating activities of the firm”. Working capital management efficiency is linked to the principle of quick collections of sales of inventory and slowing down of payment to creditors. This is to avoid having insufficient funds to pay short term liabilities.

Concept of Cash Conversion Cycle

Kulkanya (2012) defined cash conversion cycle as the lag of time between actual expenditure to pay for productive resources and the collection of cash on

receivables. Cash conversion cycle expresses the length of time a firm takes to convert its resources into cash flows. Cash Conversion Cycle is measured by taking Account Receivable period + Inventory Conversion period – Account payable period / Sales and multiplied by 365 days.

Concept of Account Receivable Period

According to Adeel et al (2012) receivables implies the recovery of the payment of the sales made on credit in the period of this sales. Naeem et al (2014) defined account receivables as customers who have not yet paid for goods or services.

Concept of Account Payable period

Accounts payable (AP) is an account within the general ledger that represents a company's obligation to pay off a short-term debt to its creditors or suppliers. Another common usage of "AP" refers to the business department or division that is responsible for making payments owed by the company to suppliers and other creditors. According to Naeem et al (2014) account payable is defined as the supplier whose payment for goods and services has been processed but has not yet been paid.

Concept of Inventory Turnover

Inventory turnover is defined as the measurement of the average rate of speed at which inventories are acquired, brought in and sold out of the company. According to Van Horne and Wichowicz (2008) in Muhammad (2015) inventory turnover is calculated to help determine how effectively the firm is managing inventory.

Empirical Review

Abdul and Muhamed (2007) investigated the relationship between working capital management and profitability of Pakistani firms listed on Karachi stock exchange for a period of six years from 1999 to 2004 selecting a sample of 94 Pakistani firms and studied the effect of different variables of working capital management including the average collection period, inventory turnover in days, average payment period, cash conversion cycle and current ratio on the net operating profit of Pakistani firms. Debt ratio, size of the firm and financial asset to total asset ratio have been used as control variables. Pearson correlation and regression analysis (Pooled least square and general least

square with cross-section weight models) are used for analysis. The result shows that there is a strong negative relationship between variables of working capital management and profitability of the firm. It means that as the cash conversion cycle increases it will lead to decreasing profitability of the firm and managers can create a positive value for the shareholders by reducing the cash conversion cycle to a possible minimum level. The study also found that there is a significant negative relationship between liquidity and profitability and a positive relationship between size of the firm and its profitability. There is also a significant negative relationship between debt used by the firm and its profitability. Robust statistical tests are required to prove its reliability. Findings should also be linked to the existing theory.

Karaduman, Akbas, Ozsozgun and Durer (2010) examined the effects of working capital management on profitability and the study provide some empirical evidence on the effects of working capital management on the profitability of selected companies in the Istanbul Stock Exchange for the period of 2005-2008. The panel data methods are employed in order to analyze the mentioned effects. All results for all models are found statistically significant. A company's return on asset is increased by shortening number of days account receivables, account payable and number of days of inventory and reducing cash conversion cycle provides positive contribution to company's return on asset. Company's size has positive effect on profitability, its debt ratio negatively affect its profitability. Robust statistical tests are required to prove its reliability. Findings should also be linked to the existing theory.

Abdul, Talat, Abdulqayyum and Mahmud (2010) investigated the impact of working capital management on firm performance in Pakistan for the period 1998 to 2007. For this purpose, balanced panel data of 204 manufacturing firms is used which are listed on Karachi stock exchange. The result indicates that the cash conversion cycle (net trade cycle) and inventory turnover in days are significantly affecting the performance of the firms. The financial leverage, sales growth and firm size also have significant effect on the firms' profitability. Cash conversion cycle and net trade cycle have insignificantly positive. Robust statistical tests are required to prove its reliability. Findings should also be linked to the existing theory.

Adina (2010) examined the efficiency of working capital management of companies from Alba county. The relation between the efficiency of working capital management and profitability is examined using pearson correlation

analysis and using a sample of 20 annual financial statements of companies covering the period of 2004 to 2008. The findings of the study revealed that there is a weak negative linear correlation between working capital management indicators of account receivables and account payables and profitability rates. Robust statistical tests are required to prove its reliability. Findings should also be linked to the existing theory.

Theoretical Framework

Transaction Motive Theory

Transactions Motive: The transactions motive relates to the demand for money or the need of cash for the current transactions of individual and business exchanges. Individuals hold cash in order to bridge the gap between the receipt of income and its expenditure. This is called the income motive. The businessmen also need to hold ready cash in order to meet their current needs like payments for raw materials, transport, wages etc. This is called the business motive.

Precautionary Motive Theory

Precautionary motive: Precautionary motive for holding money refers to the desire to hold cash balances for unforeseen contingencies. Individuals hold some cash to provide for illness, accidents, unemployment and other unforeseen contingencies.

Model Specification

$$ROA_{it} = \beta_0 + \beta_1 CCC_{it} + \beta_2 INT_{it} + \beta_3 AR_{it} + \beta_4 AP_{it} + \beta_5 LIQ_{it} + \beta_6 FSIZ_{it} + \beta_7 FLEV_{it} + \varepsilon t$$

Measurement of the Variables

ROA = Profit after tax to total asset

CCC = $(AR + IN - AP) / \text{sales} \times 365$ days

INT = $\text{Inventory} / \text{purchases} \times 365$ days

AR = $\text{Account receivables} / \text{sales} \times 365$ days

AP = $\text{Account payables} / \text{purchases} \times 365$ days

LIQ = $\text{Current asset} / \text{current liability}$

FSIZ = $\text{Log of total asset}$

FLEV = $\text{debt} / \text{total asset}$

Data Analysis and Result

Table 1: Summary of descriptive Statistics ROA, AR, AP, INV, CCC, FSIZ, LIQ and FLEV

	ROA	AR	AP	INV	CCC	FSIZ	LIQ	FLEV
Mean	0.21777 5	0.3315 00	8.2760 00	1.61425 0	- 0.3557 50	7.9330 00	0.9602 50	0.5262 50
Median	0.0435 00	0.2450 00	5.4500 00	1.0750 00	- 0.10500 0	7.8550 00	1.0800 00	0.5650 00
Maximum	3.9460 00	1.0000 00	31.580 00	11.9100 0	8.4800 00	9.0200 00	1.5800 00	0.8000 00
Minimum	- 0.2370 00	0.0700 00	2.4300 00	0.1800 00	- 9.11000 0	7.2600 00	0.2500 00	0.1700 00
Std. Dev.	0.7322 53	0.2543 22	7.13232 4	2.12052 7	2.5849 66	0.4488 74	0.3591 41	0.18310 3
Skewness	4.2081 43	1.2372 53	1.78973 3	3.7096 71	0.2844 98	1.17243 7	- 0.67812 0	- 0.2090 98
Kurtosis	20.209 13	3.4533 72	5.4295 72	16.8061 5	9.3179 97	3.9287 99	2.4080 31	1.97354 6
Jarque-Bera	611.646 7	10.547 88	31.1923 3	409.42 71	67.068 07	10.6018 4	3.6496 87	2.0474 90
Probability	0.0000 00	0.0051 23	0.0000 00	0.0000 00	0.0000 00	0.0049 87	0.16124 3	0.3592 47
Sum	8.71100 0	13.260 00	331.04 00	64.570 00	- 14.2300 0	317.32 00	38.410 00	21.050 00
Sum Sq. Dev.	20.9115 7	2.5225 10	1983.9 32	175.36 88	260.60 00	7.8580 40	5.0302 98	1.3075 38
Observations	40	40	40	40	40	40	40	40

Source: Researcher’s Computation using E-views version 9

Table 1 presents descriptive statistics of the variables of the study. It describes the mean, Standard deviation, minimum and maximum value. The average value of profitability (ROA), AR, AP, INV, CCC, LIQ, FSIZ and FLEV recorded in the period of the study is 0.217775, 0.331500, 8.276000, 1.614250, -0.355750, 7.933000, 0.960250 and 0.526250. The respective Jarque-Bera probability values are less than the t-value of 0.05% except for liquidity and financial leverage. The median in relation to ROA, AR, AP, INV, CCC, FSIZ, LIQ and, FLEV are 0.043500, 0.245000, 5.450000, 1.075000, -0.105000, 7.855000, 1.080000 and 0.565000 respectively. These are the middle numbers of the sorted data values. The maximum values which represent the largest data values in each of the variables and their corresponding minimum values representing the smallest data values are ROA: has maximum of 3.946000 and a minimum of -0.237000, AR has maximum of 1.000000 and a minimum of 0.070000, AP has a maximum of 31.58000 and a minimum of 2.430000, INV has a maximum value of 11.91000 and a minimum value of 0.180000, CCC has a maximum value of 8.480000 and a minimum value of -9.110000, FSIZ has a maximum of 9.020000 and a minimum of 7.260000, LIQ has a maximum of 1.580000 and a minimum of 0.250000, FLEV has a maximum value of 0.800000 and a minimum of 0.170000. They are the largest and smallest data values respectively. Standard deviation in respect of the variables are: ROA 0.732253, AR 0.254322, AP 7.132324, INV 2.120527, CCC 2.584966, FSIZ 0.448874, LIQ 0.359141, FLEV 0.183103. The standard deviation implies that the values in the statistical data set are closer to the mean of the data set. The table describes the variables in terms of the skewness and kurtosis thus: ROA 4.208143 and 20.20913, AR 1.237253 and 3.453372, AP 1.789733 and 5.429572, INV 3.709671 and 16.80615, CCC 0.284498 and 9.317997, FSIZ 1.172437 and 3.928799, LIQ -0.678120 and 2.408031, FLEV -0.209098 and 1.973546, respectively.

Table 2: Correlation-Matrix

Covariance Analysis: Ordinary

Date: 01/08/20 Time: 09:11

Sample: 2013 2017

Included observations: 40

Correlation

Probability	ROA	AR	AP	INV	CCC	FSIZ	LIQ	FLEV
ROA	1.000000							
ARD1	-0.055813	1.000000						
	0.7323	-----						
AP	0.489828	0.161793	1.000000					
	0.0013	0.3186	-----					
INV	0.101368	0.014199	0.504400	1.000000				
	0.5337	0.9307	0.0009	-----				
CCC	-0.068296	-0.217685	-0.021042	-0.063303	1.000000			
	0.6754	0.1772	0.8975	0.6980	-----			
FSIZ	0.426559	-0.125350	0.283861	0.284805	-0.049354	1.000000		
	0.0061	0.4409	0.0759	0.0749	0.7623	-----		
LIQ	-0.398353	-0.097501	-0.287006	-0.315707	0.213128	-0.578725	1.000000	
	0.0109	0.5495	0.0726	0.0472	0.1867	0.0001	-----	
FLEV	-0.099241	0.041256	-0.366764	-0.070500	0.273047	0.102842	0.237281	1.000000
	0.5424	0.8005	0.0199	0.6655	0.0883	0.5277	0.1404	-----

Source: Researcher’s computation using E-views version 9

The correlation matrix explains the association between the dependent and independent variable. This clearly depicts insignificantly negative correlation between ROA, AP and FSIZ. Significant negative correlation between ROA and INV was found. Positive and significant correlation was found between ROA, AR and FLEV. Insignificantly positive correlation between ROA, CCC, and LIQ was found.

Table 3: Random effect regression model

Dependent Variable: ROA

Method: Panel EGLS (Cross-section random effects)

Date: 01/08/20 Time: 09:31

Sample: 2013 2017

Periods included: 5

Cross-sections included: 8

Total panel (balanced) observations: 40

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.238145	2.325702	-0.532375	0.5981
AR	-0.592846	0.394050	-1.504495	0.1423
AP	0.067377	0.017201	3.916922	0.0004
INV	-0.119300	0.050836	-2.346759	0.0253
CCC	-0.031205	0.037949	-0.822291	0.4170
FSIZ	0.178417	0.280154	0.636855	0.5287
LIQ	-0.619305	0.343603	-1.802386	0.0809
FLEV	0.865790	0.627499	1.379747	0.1772
	Effects Specification			
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			0.552376	1.0000
	Weighted Statistics			
R-squared	0.451616	Mean dependent var		0.217775
Adjusted R-squared	0.331657	S.D. dependent var		0.732253
S.E. of regression	0.598633	Sum squared resid		11.46756
F-statistic	3.764759	Durbin-Watson stat		2.404747
Prob(F-statistic)	0.004376			
	Unweighted Statistics			
R-squared	0.451616	Mean dependent var		0.217775
Sum squared resid	11.46756	Durbin-Watson stat		2.404747

Source: Researcher's computation using E-Views version 9

The result indicates an insignificantly Negative effect of AR, LIQ and CCC on profitability (ROA) but insignificantly positive effect of FLEV, and FSIZ. The result indicates significantly negative influence of INV on profitability (ROA) and also significantly positive influence of AP on the profitability (ROA) of oil and gas company listed on the Nigerian stock exchange. The regression line $ROA = -1.238145 - 0.592846AR + 0.067377AP - 0.119300INV - 0.031205CCC + 0.178417FSIZ - 0.619305LIQ + 0.865790FLEV$ indicates that profitability (ROA) of oil and gas companies listed on the Nigeria stock exchange increases as number of days account payable significantly increases, profitability increases as firm increases in size insignificantly, profitability increases as more debts are incurred but the increase is insignificant. Profitability (ROA) decreases with increase in AR period, decrease with increase in INV period, decrease with increase in cash conversion period and decrease with increase in liquidity. The respective P-values indicate insignificant effects of AR, CCC, FSIZ, LIQ, and FLEV but with significant influence of AP and INV. The R – square 0.451616 indicate that about 45% of variation in ROA of oil and gas company can be explained by AR, AP, INV, CCC, FSIZ, LIQ, and FLEV and the remaining 55% can be explained by other variables not captured in the model. The F-statistic Probability value of 0.004376 depicts the fitness of the model.

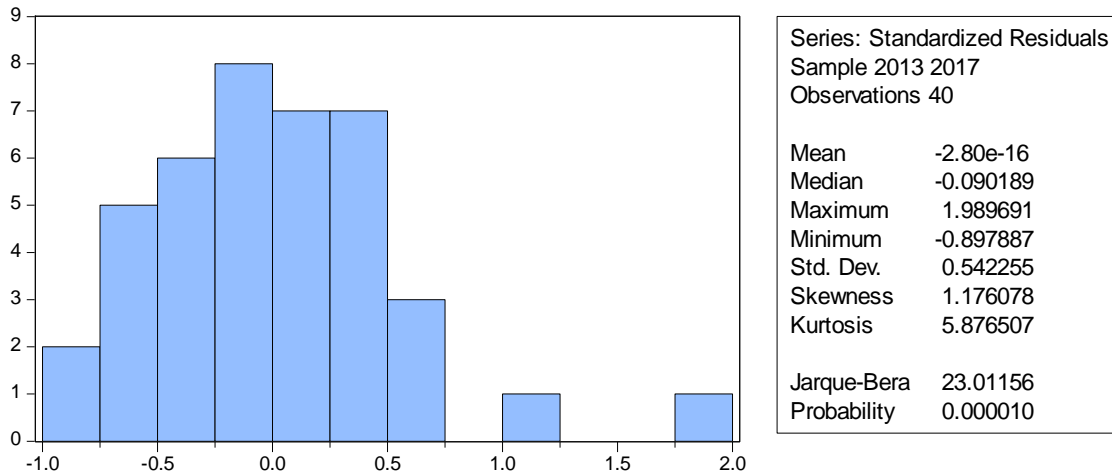
Table 4: Hausman Specification Test
Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	12.583847	7	0.0829

Source: Researcher’s computation using e-views 9

Hausman Specification test guides to choose between the fixed and random effects model. Fixed effect model is only chosen when the probability value is less than or equal to the t-value of 5% (0.05). Therefore, given the P-value of 0.0829 which is greater than the t-value of 0.05, the random effect model is chosen against the fixed effect model. Thus, it can be vindicated by using Langrangian test for random and pooled OLS regression effects.

Table 5: Post Residual Diagnostics Test Normality Test



Source: Researcher’s computation using E-views Version 9

Table 5: is the histogram table for test of normality. It is therefore posits to note that the Jarque-Bera statistics value of 23.01156 indicate presence of normality.

Table 6: Multicollinearity Test

Variance Inflation Factors

Date: 12/28/19 Time: 00:29

Sample: 2013 2017

Included observations: 40

	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
C	157.7148	903.6746	NA
AR01	9.071411	5.205924	2.255529
AP	0.000167	3.810382	3.152470
INV	0.056255	2.182135	1.503968
CCC	0.030059	1.143895	1.122098
LIQ	5.342659	32.07679	3.849733
FSIZ	1.822056	659.0674	2.050952
FLEV	8.121955	14.40919	1.521228

Source: Researcher’s Computation using e-views 9

Table 4.2.6 Multicollinearity test indicates whether the explanatory variables are highly correlated. These variables can only be highly correlated if the variance inflation factor (VIF) is greater than 10. Therefore, since the respective VIFs are less than 10, it means there is absence of multicollinearity.

Table 7: Heteroskedasticity Test

Residual Cross-Section Dependence Test			
Null hypothesis: No cross-section dependence (correlation) in residuals			
Equation: Untitled			
Periods included: 5			
Cross-sections included: 8			
Total panel observations: 40			
Note: non-zero cross-section means detected in data			
Cross-section means were removed during computation of correlations			
Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	28.30864	28	0.4482
Pesaran scaled LM	-1.027801		0.3040
Pesaran CD	-0.151583		0.8795

Test of Heteroskedasticity exhibits the Homoskedasticity of the study’s data. The observed Pesaran CD of 0.8795 is greater than the t-value of 5% which indicates Homoskedasticity of the residuals. This therefore reveals the absence of heteroskedasticity in the residuals

Table 8: Breusch and Pagan Lagrangian multiplier test for random effects

Lagrange Multiplier Tests for Random Effects			
Null hypotheses: No effects			
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives			
	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	0.018720	0.217604	0.236324

	(0.8912)	(0.6409)	(0.6269)
Honda	-0.136821	0.466481	0.233105
	--	(0.3204)	(0.4078)
King-Wu	-0.136821	0.466481	0.289617
	--	(0.3204)	(0.3861)
Standardized Honda	1.097879	0.612036	-2.101599
	(0.1361)	(0.2703)	
Standardized King-Wu	1.097879	0.612036	-1.962554
	(0.1361)	(0.2703)	--
Gourierieux, et al.*	--	--	0.217604
			(>= 0.10)
*Mixed chi-square asymptotic critical values:			
1%	7.289		
5%	4.321		
10%	2.952		

Source: Researcher’s Computation using e-views 9

Table 8: is the langrangian multiplier test that guides the study choice between Random Effect and pooled OLS Regression Model. However, the result indicated that random effect is more appropriate to OLS regression model given the Breusch-Pagan,Honda and King-Wu value of 0.6269, 0.4078 and 0.3861 respectively which are less than the critical value of 0.05 (5%).

Discussion of Findings

It is evident from the findings of the study that Account Payable period has significantly positive influence on profitability (ROA) of oil and gas companies listed on the Nigeria Stock Exchange. This implies that profitability will increase if number of days account payable is increased significantly. This finding is consistent with the findings of Richard et al (2013), Forghani (2013), Kulkanya (2012), David (2010), Naeem et al (2014) but inconsistent with the finding in Yakubu et al (2007) and Deloof (2003). This finding aligned with the

precautionary theory which refers to the desire to hold cash balances for unforeseen contingencies. Period of payment to creditors are being extended with the motive of precaution for unforeseen circumstances to pave way for profit maximization.

Insignificantly negative influence of account receivable period on the profitability (ROA) of oil and gas companies listed on the Nigeria Stock Exchange is found. This implies that profitability (ROA) decreases with increase in debtor's settlement period implying that the less number of days debtors settles their obligation the higher the profitability. This finding is consistent with the finding in Adeel et al (2012), Kulkanya (2012), Deloof (2003), Muhd (2011) but inconsistent with Afeef (2011), Lazaridis and Tryfonidis (2006). Decrease in profitability is attributable to increase in account receivable days. This finding aligned with theory of risk/return which state that the risk-return tradeoff states that the potential return rises with an increase in risk. Using this principle, individuals associate low levels of uncertainty with low potential returns, and high levels of uncertainty or risk with high potential returns.

Significantly negative influence of inventory turnover in days on profitability (ROA) is found. This implies that profitability (ROA) increases with decrease in number of days inventory turnover. The less the number of days inventories are turned over the higher the profitability therefore decrease in profitability is attributable to an increase in the number of days an inventory is released out of stock. This finding is consistent with the finding in Yakubu et al (2017), Adeel et al (2012), Kulkanya (2012), Muhd (2011), Abdul and Muhd (2007) but inconsistent with the finding in Naeem (2014), Forghani (2014), Richard et al (2013), David (2010) and the study aligned with the precautionary theory which states the desire to hold inventory balances for unforeseen contingencies. Inventories may be scarce resulting to loss of customers in future. Holding stock with the motive of precaution for unforeseen circumstances to pave way for profit maximization and also reducing stock on transactional motive increases profitability.

Insignificantly negative influence of cash conversion cycle on profitability (ROA) is found, implying that profitability decreases with increase in cash conversion period. This means that the earlier cash is converted to goods in transaction instead of holding cash, the higher the profitability. This finding is consistent with the finding in Yakubu et al (2017), Fatih and Ela (2016), Adeel

et al (2012), Kulkanya (2012), Deloof (2003), Muhd (2011), Abdul and Muhd (2007), David (2010) but inconsistent with the finding in Muhd (2016), Forghani (2013), Richard et al (2013) and David (2010). This finding aligned with the transactionary theory which states that the transactions motive relates to the demand for money or the need of cash for the current transactions of individual and business exchanges. Individuals hold cash in order to bridge the gap between the receipt of income and its expenditure.

Result of the study indicates an insignificantly positive influence of firm size on the profitability of oil and gas companies listed on the Nigeria Stock Exchange. This implies that profitability increases with increase in firm size. Increase in profitability is also attributable to increases in firm size for companies in the oil and gas industry to enjoy the benefits of economies of scale. This finding is consistent with the finding of Yakubu et al (2017), Adeel et al (2012), and Rechard et al (2013) but inconsistent with the findings of Naeem (2014) and Deloof (2003). The findings align with the transactional theory which states that the transactions motive relates to the demand for money or the need of cash for the current transactions of individual and business exchanges. Individuals hold cash in order to bridge the gap between the receipt of income and its expenditure.

The study also finds insignificantly negative influence of liquidity on the profitability (ROA) of oil and gas companies listed on the Nigeria Stock Exchange. This implies that an increase in liquidity causes an insignificant decrease in profitability (ROA). Profitability is therefore not majorly influenced by liquidity. This finding is consistent with the finding in Deloof (2003), Abdul and Muhd (2007) but inconsistent with the finding in Yakubu et al (2017), Muhd (2016), Richard et al (2013). This finding aligns with precautionary theory which states that Precautionary motive for holding money refers to the desire to hold cash balances for unforeseen contingencies. Individuals hold some cash to provide for illness, accidents, unemployment and other unforeseen contingencies.

There was an insignificantly positive influence of financial leverage on profitability (ROA) found in the study. This implies that a 1% increase in financial leverage causes also a 1% increase in profitability but the influence is insignificant. This result is consistent with the finding in the work of Naeem et al (2014), Afeef (2011), but inconsistent with the work of Adeel et al (2012), Deloof (2003), Abdul and Muhd (2007). This finding aligns with the theory of

risk/return which states that The risk-return tradeoff states that the potential return rises with an increase in risk. Using this principle, individuals associate low levels of uncertainty with low potential returns, and high levels of uncertainty or risk with high potential returns.

The coefficient of determination R-squared of 0.451616 indicates that about 45% of the variation in the profitability (ROA) can be explained by number of days account receivable, number of days account payable, inventory, cash conversion cycle, firm size, liquidity and financial leverage and the remaining 55% can be explained by other variables not captured in the model.

The Prob(F-statistic) of 0.004376 indicate the fitness of the model.

Summary

This study examined the relationship between the working capital management components such as account receivable period, account payable period, inventory conversion period, cash conversion period, firm size, liquidity and financial leverage on the profitability measured in ROA of oil and gas companies listed on the Nigeria Stock Exchange. The study employed panel regression analysis and found that account payable and inventory significantly relate to profitability of oil and gas companies listed on the Nigeria stock exchange. The study also found no significant relationship between account receivable, cash conversion cycle, firm size, liquidity and financial leverage on the profitability of oil and gas companies listed on the Nigeria Stock Exchange. This implies that the decrease or increase in profitability is majorly attributable to account payable and inventory turnover but is not attributable to account receivable, cash conversion cycle, firm size, liquidity and financial leverage.

Conclusion

It is concluded based on the finding of the study that oil and gas companies increases the number of days of account receivable, number of days inventory conversion cycle, cash conversion cycle and reduces liquidity and as a result, decreases profitability.

Recommendations

In the light of the above findings and conclusions, the following recommendations are made:

The finding of the study revealed a significantly positive influence of account receivable on the profitability therefore management and governing board of oil and gas companies should reduce number of days for debtors to clear their indebtedness in order to boost performance.

The finding also revealed an insignificantly positive influence of account payable on the profitability. Management should seek for more extension of payment period to creditors on order to increase profitability

The finding also revealed an insignificantly negative influence of inventory conversion period on profitability. Management should reduce number of days of inventory conversion in order to increase performance.

Cash conversion cycle depicted an insignificantly negative influence on profitability. Management should reduce the period it takes for cash to be converted into inventories.

The study finds insignificant positive influence of firm size on profitability. Management should maintain the lead in an effort to expand in size the oil and gas companies to take advantages of economies of scale and not to relent in the effort.

The study also found insignificantly positive influence of liquidity on profitability. Management of oil and gas companies should maintain the habit of increasing liquidity in order to align with precautionary motive thereby increasing performance.

The result of the study revealed an insignificantly positive influence of financial leverage on profitability. Management and governing body of oil and gas companies should maintain the level of external borrowing with lower interest rate and utilize the resources to increase performance.

Limitations of the Study

Some limiting factors in the course of this study among other things are the inaccessibility to the statistical data resulting to the use of five years study. The study period should have covered more than five years.

Suggestions for Further Studies

This study measured variables as indicated. Other alternative measurement of those variables can be proffered in order to examine if measurement of variables can have significant effect on the predictor variable using ten to twelve years study period.

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